

AMENDMENTS TO THE CLAIMS

1. (Original) A method for adaptive load balancing comprising the steps of:  
monitoring operating conditions of a server;  
determining, based on the operating conditions, whether to send a behavior modification hint to one or more clients that are served by the server;  
generating the behavior modification hint based on the operating conditions; and  
sending the behavior modification hint to the one or more clients.
2. (Original) The method of Claim 1, wherein the server is an AAA server and the one or more clients are AAA clients.
3. (Original) The method of Claim 2, wherein the step of sending the behavior modification hint comprises sending a RADIUS message containing the behavior modification hint in a vendor specific attribute within the RADIUS message.
4. (Original) The method of Claim 1, wherein the step of sending the behavior modification hint comprises sending a particular message containing the behavior modification hint to a particular client of the one or more clients, where the particular message is a response message to a request message sent by the particular client to the server.
5. (Original) The method of Claim 1, wherein the step of monitoring the server's operating conditions comprises monitoring at least one of CPU usage percentage, memory usage percentage, network conditions, and number of processes running.
6. (Original) The method of Claim 1, further comprising the step of determining the one or more clients to which to send the behavior modification hint based on a predefined list of clients.

7. (Original) The method of Claim 1, further comprising the step of determining the one or more clients to which to send the behavior modification hint based on a network device group.
8. (Original) The method of Claim 1, further comprising the step of determining the one or more clients to which to send the behavior modification hint based on operating conditions for the server relative to each of the one or more clients.
9. (Original) The method of Claim 1, wherein the server is one of multiple servers providing a particular service; the behavior modification hint comprises a suggestion of one or more alternative servers; and the method further comprises the step of determining the one or more alternative servers based on operating conditions for each server of the one or more alternative servers.
10. (Original) The method of Claim 9, wherein the step of determining the one or more alternative servers further comprises the server obtaining the operating conditions of the one or more alternative servers over a network.
11. (Original) The method of Claim 1, wherein the step of determining when to send a behavior modification hint is based on network conditions of one or more networks providing communication between the server and the one or more clients, wherein the network conditions comprise at least one of:  
a ping time from the server to a computer on the one or more networks;  
a round trip time of a message sent to a particular client;  
a quality of service guaranteed to one or more clients; and  
operating conditions of a device on the one or more networks used to route messages.
12. (Original) The method of Claim 1, wherein the step of sending a behavior modification hint further comprises the steps of:  
sending a code to the one or more clients; and

generating the code based on why it was determined to send a message to the one or more clients.

13. (Original) The method of Claim 1, wherein the step of determining when to send a behavior modification hint is based on a scheduled event related to the server.
14. (Original) The method of Claim 13, wherein the scheduled event related to the server is selected from a group consisting of server shutdown, server maintenance, and server backup.
15. (Original) The method of Claim 1, wherein the step of determining when to send a behavior modification hint is based on a server detecting that a particular client has sent one or more retry messages, wherein a retry message is a second or subsequent message corresponding to a particular request for service from the particular client.
- 16.-23. (Canceled)
24. (Original) A computer-readable medium carrying one or more sequences of instructions for adaptive load balancing, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:  
monitoring operating conditions of a server;  
determining, based on the operating conditions, whether to send a behavior modification hint to one or more clients that are served by the server;  
generating the behavior modification hint based on the operating conditions; and  
sending the behavior modification hint to the one or more clients.
25. (Original) An apparatus for adaptive load balancing, comprising:  
means for monitoring operating conditions of a server;  
means for determining, based on the operating conditions, whether to send a behavior modification hint to one or more clients that are served by the server;

means for generating the behavior modification hint based on the operating conditions;  
and  
means for sending the behavior modification hint to the one or more clients.

26. (Original) An apparatus for adaptive load balancing, comprising:  
a network interface that is coupled to a data network for receiving one or more packet flows therefrom;  
a processor;  
one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:  
monitoring operating conditions of a server;  
determining, based on the operating conditions, whether to send a behavior modification hint to one or more clients that are served by the server;  
generating the behavior modification hint based on the operating conditions;  
sending the behavior modification hint to the one or more clients.
- 27.-29. (Canceled)
30. (New) The apparatus of Claim 26, wherein the server is an AAA server and the one or more clients are AAA clients.
31. (New) The apparatus of Claim 30, wherein the instructions which when executed cause sending the behavior modification hint comprise instructions which when executed cause sending a RADIUS message containing the behavior modification hint in a vendor specific attribute within the RADIUS message.
32. (New) The apparatus of Claim 26, wherein the instructions which when executed cause sending the behavior modification hint comprise instructions which when executed cause sending a particular message containing the behavior modification hint to a particular client of the one or more clients, where the particular message is a response message to a request message sent by the particular client to the server.

33. (New) The apparatus of Claim 26, wherein the instructions which when executed cause monitoring the server's operating conditions comprise instructions which when executed cause monitoring at least one of CPU usage percentage, memory usage percentage, network conditions, and number of processes running.
34. (New) The apparatus of Claim 26, further comprising instructions which when executed cause determining the one or more clients to which to send the behavior modification hint based on a predefined list of clients.
35. (New) The apparatus of Claim 26, further comprising instructions which when executed cause determining the one or more clients to which to send the behavior modification hint based on a network device group.
36. (New) The apparatus of Claim 26, further comprising instructions which when executed cause determining the one or more clients to which to send the behavior modification hint based on operating conditions for the server relative to each of the one or more clients.
37. (New) The apparatus of Claim 26, wherein the server is one of multiple servers providing a particular service; the behavior modification hint comprises a suggestion of one or more alternative servers; and the apparatus further comprises instructions which when executed cause determining the one or more alternative servers based on operating conditions for each server of the one or more alternative servers.
38. (New) The apparatus of Claim 26, wherein instructions which when executed cause determining when to send a behavior modification hint is based on network conditions of one or more networks providing communication between the server and the one or more clients, wherein the network conditions comprise at least one of:  
a ping time from the server to a computer on the one or more networks;  
a round trip time of a message sent to a particular client;  
a quality of service guaranteed to one or more clients; and  
operating conditions of a device on the one or more networks used to route messages.

39. (New) The apparatus of Claim 26, wherein the step of determining when to send a behavior modification hint is based on a scheduled event related to the server, wherein the scheduled event related to the server is selected from a group consisting of server shutdown, server maintenance, and server backup.
40. (New) The apparatus of Claim 26, wherein the step of determining when to send a behavior modification hint is based on a server detecting that a particular client has sent one or more retry messages, wherein a retry message is a second or subsequent message corresponding to a particular request for service from the particular client.
41. (New) The apparatus of Claim 25, wherein the server is an AAA server and the one or more clients are AAA clients.
42. (New) The apparatus of Claim 25, wherein the monitoring means comprises means for monitoring at least one of CPU usage percentage, memory usage percentage, network conditions, and number of processes running.
43. (New) The apparatus of Claim 25, wherein the server is one of multiple servers providing a particular service; the behavior modification hint comprises a suggestion of one or more alternative servers; and the apparatus further comprises means for determining the one or more alternative servers based on operating conditions for each server of the one or more alternative servers.
44. (New) The apparatus of Claim 25, wherein the means for determining comprises means for determining when to send a behavior modification hint based on network conditions of one or more networks providing communication between the server and the one or more clients, wherein the network conditions comprise at least one of:
  - a ping time from the server to a computer on the one or more networks;
  - a round trip time of a message sent to a particular client;
  - a quality of service guaranteed to one or more clients; and
  - operating conditions of a device on the one or more networks used to route messages.

45. (New) The apparatus of Claim 25, wherein the step of determining when to send a behavior modification hint is based on a scheduled event related to the server, wherein the scheduled event related to the server is selected from a group consisting of server shutdown, server maintenance, and server backup.